

Student Management System

```
import os
```

```
FILE_NAME = "students.txt"
```

```
def add_student():
```

```
    roll = input("Enter Roll Number: ")
```

```
    name = input("Enter Student Name: ")
```

```
    marks = input("Enter Marks: ")
```

```
    with open(FILE_NAME, "a") as file:
```

```
        file.write(f"{roll},{name},{marks}\n")
```

```
    print("Student Added Successfully!")
```

```
def view_students():
```

```
    if not os.path.exists(FILE_NAME):
```

```
        print("No records found!")
```

```
        return
```

```
    with open(FILE_NAME, "r") as file:
```

```
        data = file.readlines()
```

```
    if not data:
```

```
        print("No students available!")
```

```
        return
```

```
    print("\nRoll | Name | Marks")
```

```
print("-----")
```

```
for line in data:
```

```
    roll, name, marks = line.strip().split(",")
```

```
    print(f"{roll} | {name} | {marks}")
```

```
def search_student():
```

```
    roll = input("Enter Roll Number to Search: ")
```

```
    with open(FILE_NAME, "r") as file:
```

```
        found = False
```

```
        for line in file:
```

```
            data = line.strip().split(",")
```

```
            if data[0] == roll:
```

```
                print("\nStudent Found:")
```

```
                print("Roll:", data[0])
```

```
                print("Name:", data[1])
```

```
                print("Marks:", data[2])
```

```
                found = True
```

```
                break
```

```
    if not found:
```

```
        print("Student Not Found!")
```

```
def update_student():
```

```
    roll = input("Enter Roll Number to Update: ")
```

```
    lines = []
```

```
    updated = False
```

```
    with open(FILE_NAME, "r") as file:
```

```
        lines = file.readlines()
```

```
with open(FILE_NAME, "w") as file:

    for line in lines:

        data = line.strip().split(",")

        if data[0] == roll:

            name = input("Enter New Name: ")

            marks = input("Enter New Marks: ")

            file.write(f"{roll},{name},{marks}\n")

            updated = True

        else:

            file.write(line)
```

```
if updated:

    print("Student Updated Successfully!")

else:

    print("Student Not Found!")
```

```
def delete_student():

    roll = input("Enter Roll Number to Delete: ")

    lines = []

    deleted = False
```

```
with open(FILE_NAME, "r") as file:

    lines = file.readlines()
```

```
with open(FILE_NAME, "w") as file:

    for line in lines:

        data = line.strip().split(",")

        if data[0] != roll:

            file.write(line)

    else:
```

```
deleted = True
```

```
if deleted:
```

```
    print("Student Deleted Successfully!")
```

```
else:
```

```
    print("Student Not Found!")
```

```
def main():
```

```
    while True:
```

```
        print("\n--- Student Management System ---")
```

```
        print("1. Add Student")
```

```
        print("2. View Students")
```

```
        print("3. Search Student")
```

```
        print("4. Update Student")
```

```
        print("5. Delete Student")
```

```
        print("6. Exit")
```

```
        choice = input("Enter your choice: ")
```

```
        if choice == "1":
```

```
            add_student()
```

```
        elif choice == "2":
```

```
            view_students()
```

```
        elif choice == "3":
```

```
            search_student()
```

```
        elif choice == "4":
```

```
            update_student()
```

```
        elif choice == "5":
```

```
            delete_student()
```

```
        elif choice == "6":
```

```
            print("Exiting Program...")
```

```
break
```

```
else:
```

```
    print("Invalid Choice!")
```

```
if __name__ == "__main__":
```

```
    main()
```